Radiation Damage Effects in Polarized Deuterated Ammonia

Dr. Paul McKee
University of Virginia

Solid polarized targets utilizing deuterated ammonia, $^{15}ND_3$, have proven to offer an attractive combination of high polarization, high dilution factor and high resistance to polarization losses due to radiation damage. Two recent experiments at Jefferson Laboratory in Newport News, Virginia, E93-026 and E01-006, used $^{15}ND_3$ exclusively as a source of polarized deuterons. The dependence of the deuteron polarization on the amount of dose received by the ammonia, and the effectiveness of annealing the material to recover performance lost to radiation damage will e discussed.